



AUGUST, 96

# THE GARZETTE



VOLUME 3, ISSUE 9

## GARS Ham Of The Month Beverly Bryant, KE4VDI

By Karl Phillips, N4JON

This months Ham of the Month is Beverly Bryant, KE4VDI. Beverly grew up in Macon, Georgia, attended grammar school there and went to Lassiter High School. After graduating from Lassiter in 1970, Beverly went straight into the business world and soon decided to do something else as she found work to be no fun. In 1971 she decided to return to school and enrolled at Georgia College in Milledgeville. It was there that she met her future husband, Walter, WB4PQQ. Walter had a HW100 and a quad but the ham radio "bug" didn't bite Beverly at that time.

In 1972, Beverly dropped out of Georgia College and moved to the Americus area and enrolled at Georgia Southwestern. Obviously she made quite an impression on Walter as he actually broke into school records and traced Beverly down. An incident soon followed



Beverly Bryant, KE4VDI  
Photo by Joe Biddle, AD4PZ

that steered Beverly in the direction of amateur radio.

Beverly and her mother were out one day dropping her aunt off at her home and Beverly became interested in her mother's use of the car cell phone. She told Walter of her fascination but that she thought that the cost was too high. You see, there's a well known fact nowadays that

Walter is labeled "frugal" and Beverly is labeled "cheap". That opened the door for Walter to educate Beverly to the fact that with an amateur license you can make those phone calls with an autopatch for no charge. She got interested, so Walter went out and bought a 2 meter rig. I'm not sure which license came first, the marriage or the ham but Beverly and Walter were married and she became Mrs. Walter Bryant and also became N4-something (Beverly doesn't remember her first

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## The President's Pen

By Howie Gould, W4NVF

Well our last meeting at the Kroger store in Lawrenceville was quite a bit different from what we have been accustomed to in meeting places. But that is what we are up against and I have been saying this for some time now that we need a permanent place to meet. We have members looking for a place to meet and I one out there is on this search. with Larry Os-KD4QPD if you formation or place to meet.

The program by Kevin KF4HFN on grounding was well accepted and a lot of folks received some good information. The crowd was good and I want to welcome all those new members who joined.

The summer months are hot and humid and so we do not have much planned for outdoor activities but I believe Marty Fowler, KE4MLH is working on a few things for us to do as soon as the weather cools some.

The club is in good shape, so we can go forward, looking to future growth and expansion plans. Pitch in when you can and help out on committees and other

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## THE GARZETTE

**THE GARZETTE** is the official monthly organ of the Gwinnett Amateur Radio Society serving its members and other persons interested in the advancement of the amateur radio art.

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If possible, submit items in ASCII text format or Microsoft Word format by email to [ichapman@intergate.net](mailto:ichapman@intergate.net) or by posting a private message on the SA BBS (770) 236-7372, to Ike Chapman in the GARS conference. Use the Save Attached command and mark the security to receiver only. Art can be accepted in most any graphics format and can be submitted on an IBM formatted disk or via email as a uuencoded file attachment.

Contact the editor for other format compatibility or other means of transfer. Deadline for submissions is the first of each month.

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My thanks to all of them for their help in producing **THE GARZETTE**.

All correspondence relating to articles posted in **THE GARZETTE** or for information concerning advertisement rates for **THE GARZETTE** should be directed to the following address:

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## An Internet Primer, Email

By Ike Chapman, KE4GYM

By far one of the most used applications on the Internet is electronic mail or email for short. Electronic mail allows a user to send a message to any other user connected to the Internet anywhere in the world, provide of course that you know the recipient's email address.

How does one go about finding the address of another person? Well unless that person has registered with one of the several email directories available on the Internet the only way is to ask that person. You can have him/her send you a mail message and in the header of the message will be the originating email address. This is a sure method to get the desired address correct.

Email addresses will look like "ichapman@intergate.net" or "chapman\_i@elmg.com", both of which are valid email address for myself. Lets' talk a bit about how to decipher Internet email addresses. The address is in two parts separated by the ampersand (@). The left part of the address is the destination identification of the email recipient. The right part of the address is the address of the mail server on which the recipient has their account.

Email addresses can be fairly straightforward as shown above or they can contain strings of characters and symbols that appear to make no sense at all. Some commercial services, such as America Online, and most Internet providers allow you to choose your own email address as a combination of alphanumeric characters that fall within their specific guidelines for naming. Some commercial services, such as Compuserve and Prodigy, assign an account number to each user and the email address has no apparent connection to the

user. You will also see periods or underscores used as delimiters in a email address such as "john.smith@somewhere.net" or "john\_q\_public@something.com".

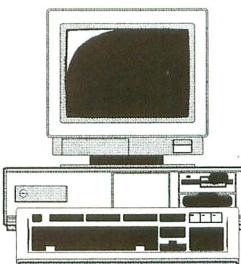
As stated above the right part of the address is the identification of the mail server on the Internet and consists of at a minimum a domain name. The domain name is a unique identification for that particular network of computers, sort of like the callsign of the network. You read the address of the machine by working from right to left, I know it sounds backwards but that's the way of the computerease sometimes.

The part of the address to the far right indicates the type of the organization or the location of the organization. In the United States this is usually a three character code of one of the following: com - commercial organizations; net - networking organizations; edu - educational institutions; org - professional organizations; gov - government bodies and departments; mil - military sites. Foreign sites are usually identified by a two letter code signifying the country of origin, i.e., CA for Canada, FR for France, UK for England, NL for the Netherlands, etc.. In some instances some sites in the United States are beginning to use the US two letter code instead of the six codes discussed above.

The next part of the address as you read to the left is the name of the organization, such as "microsoft.com", "intergate.net", "gsu.edu", "gars.org", "fcc.gov", and "usaf.gov". Any other information to the left toward the ampersand would indicate names of specific nodes on that network of subnets on that network.

Well at this point you've either

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## An Internet Primer, Email

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Well at this point you've either said "oh yeah, so that's what all that means" or "huh? What the heck did he say?". I certainly hope it's the former and not the latter as we proceed.

Okay, we've figured out the email address of the person we're going to send the mail to and how to decipher that address, so what's next? The first step is to make sure that your computer is connected to the Internet, either by a commercial service, an Internet service provider, or a gateway from where you work. Then you will need to have a mail program to format and sent the message. The mail program can be ELM or PINE for a UNIX computer, or a Windows based program such as Eudora, Exchange, or CCMail for a Windows based computer.

When the current email system was designed a method of exchanging messages among different email applications and in fact different operating systems was needed. This meant that if I was on a UNIX computer composing a message and sent it to a Macintosh there would have to some common ground to be able to send and receive the mail message. The method used to bridge these different systems is to use ASCII text (essentially the characters on you keyboard) to compose email messages. There can also be a limit as to how big you email message can be, usually 64K. If you exceed this limit the sending or receiving system may truncate you message or simple refuse to send or receive it.

But the problem is that we don't all work and play in a completely ASCII world, we use word processors, or spreadsheets, or we have scanned images and if we use these applications sooner or later we will want to a file to some-

one else. Well fortunately you can get by the limitations of ASCII text and that 64K file size by attaching files to your mail message and then sending whole shebang across the Internet. But again we could be dealing with different mail programs and different operating systems so we have to encode the file to guess what, yep ASCII text, and then decode it on the other end. Most mail programs such as Eudora contain the necessary software to do the encode/decode for you and all you see is the attachment as you read the mail message, just save the attachment to disk and bring it in the appropriate application and you're hitting on all cylinders. The most common methods of encoding files are uuencode and mime. If you mailer does not include support for encode/decode there are shareware versions of the software available on the Internet to use.

If you are a **GARS** member and have an Internet email address, send me a message and I'll be glad to add you to the email list and put you on the **GARS** web page. My email address is ichapman@intergate.net.

In the next edition of the Internet Primer, I'll discuss USENET news groups and mailing lists, until then happy computing.



### Random Ramblings

"You know you're getting old when it takes to much effort to procrastinate."

>>> Unattributed

"A friend is someone who sees through you and still enjoys the view."

>>>Wilma Askinas

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## A SHORT VERTICAL FOR THE TOP BAND

By Phil Scovell, AF0H

Soon after purchasing a transceiver with 160 meter capability, I decided to go for the top band. At that time, I was renting a bi-level duplex with the smallest backyard I had ever seen as a ham. It was only about 30-by-40 feet, and the front yard was even worse. To complicate matters, I had 38 feet of Rohn 25G bolted to the back of the house at the 14 foot level, with a single set of guys at 35 feet. Perched on top was a 4 element 20 meter yagi on a 24 foot boom. The tower itself was simply too short to shunt feed and a 160 meter inverted [L] was out of the question. Even an adequate ground system in that limited space was impossible. I did the only thing left to do - made a short top loaded vertical.

Most of us have always considered 160 meters to be limited to those with miles of open range and super tall towers. Few, in the city, have much more than 260 ft. of yard space, the needed length for a half wave on 1.8 MHz, or even enough room; not to mention the money, for a 130 foot tower - the length of a quarter wave for 160 meters. For those of us with small yards and even smaller towers and limited budgets, there is no hope? Not so! My vertical was only 32 ft.

Short top loaded verticals for 160 are commonly used and their advantages are numerous. Conveniently, they need almost no ground. The nicest thing about top loaded verticals is their radiation pattern: The antenna radiates from the top instead of the bottom; thus allowing the signal to be projected from above ground where it does the most good.

### CONSTRUCTION

Using the remains of a telescoping push-up mast from Radio Shack, I bolted 24 feet of vertical mast to the peak of the duplex on

the west side of the house at the 20 foot level. Sandwiching a piece of plastic between the house bracket and the edge of the roof helped insure the antenna was adequately insulated. My telescoping mast was once about 40 feet but only 24 feet remained after a 100 MPH plus wind storm - you use what you have.

Setting the mast on a block of wood, again using a piece of plastic for insulation, I planted the antenna. The braid, shield, goes to ground. Your ground can be, as in my case, a nearby chain link fence, or a ground rod, or even a cold water pipe. If there is room, lay out as many wires, no matter how short, as you can; and attach your shield to the wires. The larger the diameter of wire, the better. Yes, you can use insulated wire; in fact, it is preferred if you plan to bury it. The center conductor goes to the base of the antenna.

### TOP ASSEMBLY

The top of the vertical was made up of: A- 4 feet of 1 inch aluminum tubing, B- 3 feet of 2.5 inch plastic tubing: PVC pipe, and C- an additional 7 feet of 1 inch aluminum tubing. I used 2.5 inch diameter PVC for my coil form because I had no idea how large a 160 meter resonator should be. Later, of course, I discovered I could have gotten along with something smaller. Learning is what home brewing is all about.

I bolted both the 4 foot and 7 foot pieces of aluminum tubing to either end of my 3 foot PVC pipe - a few inches down inside either end to insure structural strength - the 4 foot length on the bottom and the 7 foot poking out the top.

### RESONATOR

The coil, or the 160 meter resonator, was a winding of 14 gage insulated wire wrapped

around the middle of my PVC pipe. How much wire did it take? I wanted my antenna to resonate near the bottom of the band, 1800 KHz, since I was mostly interested in CW. A quarter wave at that frequency is 130 feet. The total length of my vertical, I judged, would be about 32 feet, so I wound the difference, 98 feet, around the plastic pipe and tied the ends of the wire to the bolts used to secure the aluminum tubing to the PVC coil form.

### HIGH VOLTAGE

The voltage on such a coil is very high. If high power is to be used, a heavier insulated wire, such as RG8U, should be used for the winding to prevent arcing. Some hams even used quarter inch copper tubing wound on a coil form when running a KW. My 100 watts, however, presented no such problem, thus the 14 gage insulated wire was satisfactory.

### CAPACITY HAT

After dropping my top assembly a foot or so down inside the 24 foot vertical mast already bolted to the edge of the roof, and securing it with a U clamp, I hurried to the basement and fired up the transmitter. You guessed it...it didn't work! I found that not only would the antenna not load, but there was no resonate frequency anywhere on the band. I rechecked everything and made numerous adjustments but the results were the same. I even added and subtracted wire from my coil, but nothing changed.

Sitting on the roof, contemplating my dilemma, I suddenly recalled that trapped verticals used capacity hats. Crawling over to my home brew 5 element 6 meter beam, which I had recently removed from the tower and left

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## A SHORT VERTICAL FOR THE TOP BAND

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laying on the roof, I plucked off two elements. Quickly clamping these 2 aluminum elements in an X-formation to the top of my vertical, I dropped the entire assembly - now looking like a giant TV antenna - back down inside the 24 ft. vertical mast and tightened it down.

Hurrying to the basement, I once again tried to load the antenna. It worked! It resonated at about 1815 KHz. Playing with various lengths, I was able to raise the resonate frequency enough to allow me about 50 KHz of room before the SWR became too unreasonable. My capacity hat was over 9 feet in diameter but without it, the antenna would not resonate.

### RESULTS

Just because an antenna can be made to resonate, does not mean it will radiate. I have made 3 feet of coax laying on the back of my desk resonate but could not talk across town with it. This antenna, however, worked; and worked well.

I finished my antenna project in early May and operated almost nightly until mid-July when I pulled down everything to move to a new location. I made dozens of contacts during this period of time and worked both East and West coasts often. On sideband, I often received reports of 10 and 20 dB over S9 from W5, W6, and W7. Although the summer time conditions from Colorado are not the best for working the East Coast, do to high static levels, I worked a few - none out of the northeast - with reasonable reports on the better nights. Most think that 160 does not propagate during the summer because of the low frequency. Although this is certainly not true, you better plan on getting used to listening to the static. Interestingly enough, the static level is almost

nil a few minutes before sunrise each morning and the band goes long during that window opening.

I found that the top loaded vertical is one of the most commonly used antennas on 160 meters and often are only 30-to-40 feet in total length. Simple 30-to-50 foot telescoping masts are often used for the vertical element which can be easily purchased from most radio and hobby stores. Capacity hats range from about 3-to-10 feet in diameter and sometimes even greater. A friend of mine in Texas has used 22 foot diameter cap-hats when using short verticals under 40 feet in height; thus getting as much signal above ground as possible.

### GROUND SYSTEMS

On 160 meters the greater your ground system, usually the better your signal. This, however, is perhaps the greatest benefit of the top loaded vertical for the Top Band. I have worked hams on 160 who have been using 40 foot push-up masts and 5 foot diameter capacity hats with no more ground system than a single short ground rod driven in at the base of the antenna. Some use nothing more than a wire running over to a nearby cold water pipe or fence. Top loaded verticals simply work well with little ground and signals from such antennae compare well with the larger base loaded antennae - shunt fed towers with large ground systems for example.

There seems to be one additional advantage to a short top loaded vertical on the Top Band over many other antennae. Because of its size, it has reduced signal capture area. This means, in high static conditions, the shorter antenna often is able to hear the weaker signals, - perhaps do to the fact it is less resonate at the static frequency - compared to shunt fed towers for example. I know some will take issue with this statement,

but I have personally observe this to be true. Many times, when comparing incoming signals with local stations using larger antennae; who have not been able to copy a weaker signal, I have, on the other hand, with the shorter antenna, been able to hear and copy clearly.

### CONCLUSION

If you have a 160 meter position on your transceiver, now you can try it out. In recent years, the Top Band has become more popular with hams who have discovered that short antennae indeed work well at low frequencies. Of course, the winter conditions are the most favorable for 160 meter communications, but you will find even the summer to be good for under 1,000 miles. An amplifier certainly helps on any band, especially during the noisy summer time, but I have no problem working the western half of the U.S. from Colorado even with 100 watts. If you want to try the Top Band but are short on money, space, and tower; try the short top loaded vertical. You won't be disappointed.

Phil Scovell  
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submitted by Steve Burel, AD4LY  
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### Random Ramblings

"Alan Ginsberg said he saw the best minds of his generation destroyed by madness. I have seen the best minds of my generation go at a bottle of Anacin with a ball-peen hammer."

>>> P.J. O'Rourke

"If at first you DO succeed, try not to look astonished!"

>>> Unattributed



## Stealth Ham Radio

by Bill Kaufman WB4VHY

After being out of ham radio for about 15 years or more the bug hit me again (or should I say the keyer). Fortunately I had kept my license up to date but unfortunately my house was in a subdivision that doesn't allow antennas of any kind. Plus my wife defines antennas as "spiky" things. A technical term she discovered when I showed her a picture of a R5 vertical. Ham radio sort of crept up on me very slowly and before I knew it I was hooked again.

I guess I can blame my re-kindling of ham radio on Walter Bryant, WB4PPQ. Walter started talking about ham radio to me at work one day and the memories of working DX and having fun started bubbling up from the old subconscious. Then on a sad note, my Elmer died and I was sent a ham radio goodie box. The goodie box consisted of an old ICOM 2 Meter mobile, a Heathkit HW8 QRP transceiver, a Heathkit electronic keyer, and some miscellaneous connectors.

The ICOM turned out to be loaded with crystals and one set was for **GARS** (how lucky can you get). So for the investment of a cheap magnetic mount antenna I was on the **GARS** repeater. The HF rig was now going to be a lot harder to get on the air. After a discussion with the wife, I learned that not only did I have the antenna restrictions but she had inside restrictions also. I just couldn't convince her of the beauty of radio equipment. Fortunately our bedroom has his and her walk-in closets with room in the back of mine for a small HF setup. I also lucked out that the closet has an air conditioning vent and a light. With heating and cooling and a bathroom across the room who could ask for more! It doesn't hurt that the refrigerator is not far away either.

This met the wife's inside restrictions and she even surprised me by finding a small table to set the equipment on and a chair. The table fitted perfectly in the closet and with a few QSL cards (DX contacts from the 70's) hanging on the wall I had a radio room. The big problem of an antenna farm still existed. The restrictions clearly stated no outside antenna of any kind so on a hot day I climbed the stairs to the attic above the garage.

My first attempt at the attic antenna farm consisted of a 10 meter and a 20 meter dipole. I had forgotten about my 10 meter mobile rig I had bought several years ago. I had a 3 amp power supply and as long as I ran the 10 meter rig on low power (5 watts) it wouldn't load the power supply down. So now my radio empire consisted of a HW8 running QRP CW on 20 meters and a 10 meter rig running QRP SSB and CW. This was quite a bit different than my radio setup from the 70's were I ran a Kenwood TS520 and a Heathkit SB200 linear into a 6 element TH6DXX beam at 50 feet.

The 10 meter rig did very well for 5 watts into an attic dipole but the HW8 with a couple of watts into the attic didn't work very well. I guess low sunspot activity didn't help matters much either. You can probably guess a true ham is never satisfied so I began to dream about a 40 meter dipole. But how do you fit a 40 meter dipole (about 66 feet long) inside an attic. It definitely wouldn't fit in the attic space above the garage so I ventured into the main attic. The main attic measured about 50 feet across which unfortunately is not big enough for a full size 40 meter dipole.

After looking at some antenna ads for shortened dipoles I decided to make a shorted dipole for 40 meters. So I gathered data

books and scoured them for formulas to wind coils. Next I made a trip to the big hardware store and purchased wire and some PVC tubing for the coil forms. It took me a while to wind the coil on the PVC tubing as I had to hot glue each turn to keep it from sliding off the PVC tubing. I finally assembled the 50 foot half wave 40 meter dipole with a coil half way in each quarter wave section. I must admit it looked pretty good but I couldn't get it to work. The SWR was way out of sight and I didn't have a SWR analyzer available at the time to tell me where the darn thing was resonant. So frustrated, mad, and maybe a little crazy (I think my wife thought this) I returned to the drawing board.

I decided no more coils and I wanted a 40 through 10 meters attic antenna with no antenna tuner. I have enough knobs to tune on the transceiver and I didn't want anymore to tune. So I thought and thought and finally decided to build a full size 40 meter dipole and bend it around to fit the attic. Back to the hardware store for some more wire and this time some wooden dowels. I built a 40 meter dipole with a 20 meter, 15 meter, and a 10 meter dipole hung under the 40 meter dipole. I ran the four parallel dipoles through wooden dowels for spacing and fed the whole mess with one coax and balun. I was smart this time to tune it in the backyard before I dragged it into the very hot attic. I hung the antenna from the handy swing set (my daughter was keeping a close eye on her swing set) to a tree in the yard. I started with the tuning of the 40 meter dipole and worked my way up to the 10 meter dipole. I was amazed at how well four dipoles on the same coax worked. The 40, 20, and 15 where

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## Stealth Ham Radio

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very flat but the 10 meter is a little narrow banded. Tunes great in the backyard but how will it perform in the attic?

I had to wait to three o'clock in the morning for the attic to be cool enough to string the antenna. The 40 meter dipole looks like a "S" shape and the others fit fine in the attic. My favorite name for the 40 meter dipole is my tortured dipole but it turned out to be very flat and I had to do very little additional tuning on any of the dipoles. My wife told me that I sounded like a giant rat climbing around in the attic. She wasn't too happy with me the next morning for keeping her awake either!

Since I had a 40 through 10 meter antenna farm, I needed another rig (again a ham is never satisfied). After attending one of the local big Hamfests I had dreams of a 100 watt HF transceiver. A good friend of mine in Florida had a Kenwood TS830S transceiver for sale and I gladly took it off his hands. Now there one more problem to overcome. After listening to 80 meter CW one night I now yearn for a 80 meter dipole for the attic. Again a ham is never satisfied but I haven't come up yet with a solution (without a antenna tuner) for this one. Maybe by the winter when the attic is cool again I'll have a idea to try out for 80 meters.

I still don't get to operate as much as I would like but when I do I have great fun. When I slip on my headphones and listen to some CW the stress of the day melts away. I call this my RF therapy and I enjoy ham radio very much. I must give my wife credit for putting up with me and some of my crazy Ham Radio projects. She even surprised me by buying one

## GARS Grows Again!

Two new members were voted in at the June meeting.

Jay Robins, KF4IIV  
Derrec Utley, KE4SIU

Four new members were voted in at the **GARS**/Alford annual picnic:

Ken Faulkner, AE4RS  
Marty Ernst, KD4HLV  
Ken Parrish, KN4UO  
Paul Knowlton, KE4GBS

Please welcome the new members to the club in person and on the **GARS** repeaters.



### **GARS Meeting Location For August**

The August **GARS** meeting will be held on August 15 at the Kroger on Highway 20 in the Wal-Mart shopping center in Lawrenceville. This is the same location as the July meeting. The meeting will begin at 7:30 PM with a pre-meeting meal at the Ryan's Steak House on Pike Street in Lawrenceville beginning at 6:00 PM. Hope to see each and everyone there.



of the **GARS** shirts with my name and call on it. I still think it's a little strange when I drive up to my house and there is not an antenna in sight. It gets a little weird when you walk through the house and there is not a sign of ham radio unless you open the door to my closet. I hope this doesn't make me a closet ham.



## GARS Ham Of The Month

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call sign).

In 1973, her novice ticket expired and Beverly didn't upgrade. In 1978, she and Walter moved to the Dallas suburb of Lewisville and she enrolled at North Texas University to get her degree in Computer Science. The computer bug had bitten her while working for Texas Instruments as a secretary and became fascinated at a coworker's use of a computer.

In 1990, Beverly and Walter moved to Atlanta and in 1991 bought a home in Lawrenceville. Beverly currently works for Nordson Corporation as a programmer. Her main responsibility being the programming of the machine that squirts the glue that seals boxes. (Now every time I open a box of cereal, I find myself looking inside for a stencil saying "glued by KE4VDI".)

In 1994, Beverly got the desire to get back into ham radio, joined the **GARS** club and got her Technician ticket. She has successfully passed the General theory but is still working on the code. As an active member of the club, she assists Cheryl McClure, AE4HN with the Tuesday night code practice. She spent many hours at field day and it was Beverly and Walter's rig that was setup for the novice 10 meter phone station. Beverly is also a regular attendee at the club meetings, where she can be found knitting away as the meeting goes on.



### Random Ramblings

"Results! Why, man, I have gotten a lot of results. I know several thousand things that won't work."

>>> Thomas A. Edison

## The Way I See It, Part 4

### FCC Part 97

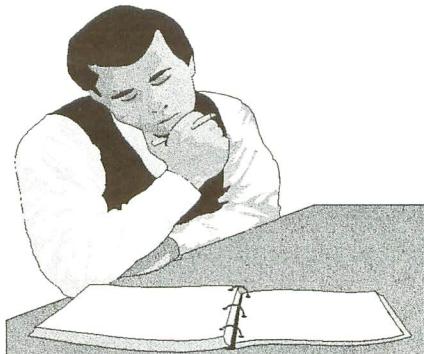
By J. Pickett Cummins, AD4S

In this edition of TWISI, we are going to look at requirements for a control operator, stations located on ships or aircraft, and antenna structures. This will be a fairly short article since part 5 will deal with the subject of the amateur license, which is a fairly extensive subject to review.

Subpart A, Section 97.7 states that each amateur station must have a control operator when transmitting. A control operator must have a valid amateur license, a reciprocal permit for alien amateur license, or a license issued by the Government of Canada. In the case of the Canadian license, the person must also be a Canadian citizen.

Section 97.9 describes the classes of amateur operator licenses and the circumstances allowing the privileges that can be exercised when submitting a valid form 610 to an administering VE. This section allows operating to begin before the physical license is received from the FCC. It does limit the time that these privileges can be exercised to the final disposition of the application or 365 days, whichever comes first.

Section 97.11 deals with amateur stations installed on ships or aircraft. The installation must be approved by the captain of the ves-



sel or pilot in command of the aircraft. The equipment must be separate from all other radio equipment that is installed but can use a common antenna. This particular provision is probably one of the most violated terms of Part 97. I have worked many more stations on aircraft and on shipboard that were using commercial and military radio equipment than any other type. This equipment is not type accepted by the FCC and consequently cannot be used on the amateur radio frequencies. This is the same problem that occurs when someone uses amateur radio equipment on the Citizen's Band frequencies. Amateur radio equipment is not type accepted by the FCC for use on those frequencies.

This section also provides that use of amateur radio equipment on board ships and planes cannot con-

stitute a safety hazard. In the case of a station installed on an aircraft, it cannot be operated while the aircraft is operating under IFR unless the equipment has been found to comply with all applicable FAA Rules.

Section 97.13 deals with restrictions on station locations. Basically, these rules deal with environment protection as well as places significant to American history, architecture or culture. This section also deals with stations that are located close to a FCC monitoring facility.

Finally for this short article, Section 97.15 deals with the antenna structures. Prior approval of the FCC is required for an antenna that will exceed 200 feet. This section also outlines the limitations on antennas located on a public airport. These rules provide for height restrictions based on the distance from the aircraft runways.

The last paragraph of this section may be one of the most important in all of amateur radio. Paragraph (e) of Section 97.15 Part A is the ruling that prevents state and local regulations from prohibiting the installation of an antenna structure for use in the amateur radio service. This paragraph was the result of the famous PRB-1, 101

(Continued on page 9)

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## The Way I See It, Part 4

(Continued from page 8)

FCC 2d 952 (1985) ruling. This provision has been tested vigorously in many parts of the country including Fulton County Georgia and the amateur has prevailed in every case.

Next time we will launch into the amateur radio license itself, vanity call signs, modified and renewed licenses and the administration and documentation of amateur licenses. If time permits, we will examine station control, authorized transmissions, third party communications and international communications.

For now, you might want to make a permanent note regarding the PRB-1 ruling covered in this article. If you have any questions or comments, you can leave mail for me on the SABBS or send e-mail to sgrg82a@prodigy.com. 73 es gud dx de AD4S.

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### Random Ramblings

"I think animal testing is a terrible idea; they get all nervous and give the wrong answers."

>>> A Bit of Fry and Laurie

"Madness takes its toll. Please have exact change."

>>> Unattributed

## Don't Let This Happen To You

By Karl Philips, N4JON

On June 16<sup>th</sup> I answered a CQ generated by AC4ZX. The call was computer generated, the same as voice identifier on the **GARS** repeater. Thinking that AC4ZX was only using it to call CQ, I fully expected a live voice to pick up the mike to continue the QSO. After giving him my name and QTH, I was very surprised to hear him continue to use the speech processor after I turned it back to him. His answers to my questions and information were slow and unconnected. It was as if he didn't know how to use the processor very well.

I became suspicious that this could be some ham's child "playing" with his rig. Then I made a mistake, a big mistake. I began playfully imitating the computerized voice. When AC4ZX didn't come on "live" to ask me what I was doing, I stopped making fun and went back to try and carry on a normal QSO with what I thought was a child messing with his father's rig. Still, AC4ZX's answers were not sharp, nor timely. When I asked about his weather.....15 to 20 seconds elapsed before the voice said only one word, "HOT". His pauses between responses grew longer and longer until he just went away, not responding anymore to my questions.

It was then that I discovered that AC4ZX was a legit contact. AC4ZX is a disabled ham with

cerebral palsy and has to use the voice synthesizer to enjoy ham radio. He was doing all he could to continue our QSO and not only was I assuming that the contact was bogus, but I was poking fun at the synthesized voice.

Let the lesson be learned! There are people out there that need to use other means to enjoy the hobby of ham radio. Don't make the same mistake that I made. Don't assume these synthesized voices to be that of a practical joke. I was very embarrassed that I had fallen victim to my own ignorance. I wondered what AC4ZX thought about my actions on the other end of that QSO.

I called Rob's father and apologized. He was very accepting of my apology and delivered my message to Rob. Don't let what happened to me, happen to you.

Have you seen the 1996  
**GARS** photo album?

If so, please contact  
Publicity Chairman  
Larson Watts, KE4HLH  
at (770)475-0673.

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**SWAP, WANTED and SELL NET**  
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**MORSE CODE PRACTICE**  
An interactive Morse Code practice session follows the 8:00PM Tuesday night net on the **GARS** 2m repeater.

**PACKET RADIO USERS NET**  
Wednesdays at 8:00 PM on the **GARS**  
2m Repeater.

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## Rookie Radio Notes

By Cheryl McClure, AE4HN

Just a couple more months until the summer heat begins to fade and then it's back to school. If you are interested in Morse Code classes or license upgrade classes, stay tuned to the weekly **GARS** net and this newsletter. Classes are now in the planning stages and a schedule will be coming soon. Some people study better on their own and others need the motivation of a class setting. Find out what works for you and upgrade your way to more bandwidth!

The antenna tuner kit workshop has had great response. We currently have as many builders as we can handle. If you are still interested in joining, let me know immediately (770-995-5159). If anyone drops out before the kit order is placed, you will get your chance at the spot. Remember for future reference, kit classes go fast. So sign up quickly to reserve your place. There has been a suggestion to build a keyer to go with the 40 Meter QRP rig that was built in the last kit class. If you might be interested, give me a call and I'll set that up after this class is done.

Another item in the works is a repeat of the **GARS** Pro/Am contest. Those who were lucky enough to participate in the last event had a blast. This event pairs a "Pro" (someone General Class or higher that has a HF station) with an "Am" (amateur/Less than General Class license) in a contest for points simi-

lar to Field Day. This is a great opportunity for those with little chance to experience the HF bands. You get to sit down at a HF rig for one on one operator training. It can really motivate you to upgrade when you see for yourself what fun can be had on HF. The next contest will be held when the weather cools off and everyone is ready to stay indoors for a while.

Finally, I'm trying to arrange for a tour of club members mobile rigs in the parking lot before a meeting. There has been several people express an interest in seeing how this is done. This should happen before we lose daylight at meeting time, so look for it in the next few months. Don't miss those meetings or you might miss out!



### You might be a ham if:

you know that CW does not stand for Clock Wise.

you've ever taken a lightning hit in your yard that blew every piece of electronics in the house because your ground was so good.

you know that slow scan does not mean slowly turning your head to check out the other people around you.

## The President's Pen

*(Continued from page 1)*

club needs. You will not only feel good but you will be contributing to a good cause. Thanks for all the help of those individuals who have already volunteered for various duties. Mark Kozma, KD3GC has been appointed Field Day chairman for 1997. John Farr, KD6CLO is our new Packet Cluster committee chairman and Suzanne Farr, his XYL, is the new Christmas party committee chairman. We also gave Art Smith, KE4MQX the honorary position of Official Publisher of **THE GARZETTE**. We can not overstate the great job Art does for us in this position and we are very fortunate to have folks like him as members of this great club.

Keep your ears tuned to the horizon and catch all the news when you can and we will see you at the next club meeting.

73  
Howie W4NVF



### You might be a ham if:

you would not buy your wife's idea of the perfect house because you could not put up a tower.

Thanks to Marty Ernst, KD4HLV

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## Metro Atlanta Club Meetings

**First Tuesday**  
**Metro Atlanta Telephone Pioneers**  
Old Hickory House, 5490 Chamblee-Dunwoody Rd, Dunwoody. Dutch dinner is at 6:30PM, followed by meeting. Talk In -145.410(-)

**First Wednesday**  
**HamWatch**  
Alpha Soda Restaurant, Haynes Bridge Road, Alpharetta, Dinner at 6:30PM. Meeting at 7:30PM

**First Thursday**  
**N.E. Ga ARC**  
Jefferson Civic Center, off Memorial Dr. toward Winder from Jefferson. Meeting is at 6:30PM. Talk In - 147.225(+)

**Atlanta Radio Club**  
Kitteredge Magnet School, North Druid Hills Rd. and Briarcliff. Meeting is at 7:30PM Talk In -146.820(-)

**Second Wednesday**  
**North Fulton Radio League**  
Alpha Soda Restaurant, Haynes Bridge Road, Alpharetta, Dinner at 6:30PM. Meeting at 7:30PM Talk In - 145.47(-)

**Second Thursday**  
**Alford Memorial Radio Club**  
Elks Lodge on Memorial Drive. Dinner at 6:00PM Meeting at 7:30PM. Talk In - 146.760(-)

**Second Saturday**  
**East Atlanta LAN**  
Scott Blvd Baptist Church in Decatur. Meeting is at 10:00AM. Talk In - 145.410(-)

**3rd THURSDAY**  
**Gwinnett Amateur Radio Society**  
Gwinnett Justice And Administrative Center in Lawrenceville. Meeting begins at 7:30 in the main auditorium Talk In-147.075(+)



Visit GARS On The World Wide Web

<http://www.gars.org>

Up to date information on club activities,  
officers, committees, announcements,  
**THE GARZETTE** Online, and much more.

Email suggestions for additions to  
[gtomlin@mindspring.com](mailto:gtomlin@mindspring.com) or [ichapman@intergate.net](mailto:ichapman@intergate.net)

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# THE GARZETTE

AUGUST, 96

Gwinnett Amateur Radio Society  
P.O. Box 88  
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#731

The next GARS meeting will be on August 15 at the Kroger in the Wal-Mart Shopping Center on Hwy 20 in Lawrenceville. The meeting will begin at 7:30 P.M., see you there!

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## THE GARZETTE

AUGUST, 96

### Metro Atlanta Test Sessions

GARS Publishes Metro Area VE/VEC Exam Schedules as a service and is not responsible for errors or changes. Call and confirm schedules before going. All sessions are walk-in. Take copies of current license and certificate of completed

1st Sunday - 2:00PM - W5YI VEC  
Duane Reynolds, WB2YAD - 338-8791  
Jackson EMC, 461 Swanson Road,  
Lawrenceville

1st Monday - 7:30PM - ARRL VEC  
Delaine McCarthy, KM4FV - 993-9758  
St. Ann Catholic Church - 4905 Roswell  
Rd - Marietta

1st Saturday - 9:00AM  
George White, KN4NG 361-6850  
Clayton Co. Emergency Mgmt. Bldg.  
7496 N. McDonough St. - Jonesboro

2nd Sundays - 3:00PM  
Mike Mahaffey, AD4QB - 974-7710  
First Presbyterian Church,  
183 West Main Street, Cartersville

2nd Tuesday - 7:00PM  
Wayne Taylor, WD4CCA 498-7759  
Walton EMC  
3645 Lenora Church Rd, Snellville

2nd Saturday - 8:30AM - CA VEC  
Hal Martin, KI4RD - 978-9160  
Stone Mountain Methodist Church  
5312 West Mountain St., Stone Mtn.

3rd Saturdays - 9:00AM - CA VEC  
Larry Huff, WA4CQZ - 955-3171  
Marietta First United Methodist Church  
56 Whitlock Ave, Room 305

4th Sunday - 2:30PM - ARRL VEC  
Steve Schmidt, KR4DL - 242-6142  
Episcopal Church of the Atonement  
Highpoint Rd, Atlanta

4th Tuesday - 7:00PM ARRL VEC  
Jessie Clower, KB4WFK - 942-6466  
United Way Service Center  
6279 Fairburn Road, Douglasville, GA

4th Friday - 7:00PM  
**GARS W5YI-VEC**  
Howie Gould, W4NVF 921-8362  
St. John Neumann Church  
801 Tom Smith Rd, off Five Forks  
Trickum Rd, Lilburn

Mon	147.21+	8:00PM	Congers ARES Net t-162.2
Mon	145.45-	8:00PM	ARES Net (Decatur)
Mon	145.47-	8:00PM	North Fulton ARL Net
Mon	145.41-	8:30PM	MATPARC Net
Mon	3.975	8:00PM	Swap Net
Tue	147.075+	8:00PM	<b>GARS Weekly Net</b>
Tue	147.075+	9:00PM	<b>GARS CW Practice</b>
Tue	145.47-	10:30PM	Insomniac Net
Wed	147.075+	8:00PM	<b>GARS Packet Net</b>
Wed	145.41-	8:00PM	Chapter 49, QCWA Net
Wed	146.67-	9:00PM	LARC Net
Wed	146.655-	9:00PM	BSRG Net t-188.8
Thu	146.88-	8:00PM	Kennahoochie ARC
Thu	147.225+	8:00PM	NE Ga ARC
Thu	147.15	8:00PM	simplex
Thu	145.41-	9:30PM	AMSAT
Thu	Cable57	9:30PM	Amateur Television, ATV
Fri	3.898	8:00PM	GA Traders Net
Fri	146.76-	Midnight	Turnip Truck Net t-107.2
Sat	7.275	8:00AM	Swap Net
Sat	3.857	9:00AM	Chapter 49, QCWA Net
Sat	146.76-	Midnight	Turnip Truck Net t-107.2
Sun	147.075+	8:00PM	<b>Gwinnett ARES Net</b>
Sun	146.82-	8:00PM	ARC Net
Sun	146.76-	7:00PM	Roundtable AMRC t-107.2
Sun	7.275	9:00AM	GA Traders Net
Sun	3.983	5:00PM	GA ARES
Daily	146.76-	Noon	Brown Bag Net t-107.2
Daily	146.88-	11:00PM	Late Nite Owl Net
Daily	146.79-	8:00PM	Sassafrass Mtn.
Daily	3.975	6:00PM	WX & Skywarn

This is a "living list", meaning it is constantly changing. If you know of additions or changes to it please contact the Editor.